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ABSTRACT

This study attempted system-wide institutionalization of a consultation-based ancillary service delivery model into the norms and work behaviors of the elementary school organization, through modifying the role and function of members of existent school-based multidisciplinary Child Study Teams (CSTs) and the demonstration of the potential of the team-based consultation model for increasing the achievement of referred students. CSTs in five elementary schools generally consisted of the building principal, reading teacher, school nurse, school psychologist, regular education teacher, special education teacher, speech therapist, and mathematics teaching assistant. Five replications of a field-based Staff Development Treatment Package were conducted over a 2-year period. Successful implementation in all schools was indicated by increased teacher referrals, decreased psychoeducational evaluations, decreased special education placements, and attainment of research-based change model criteria modified for use with teams. Diagnostic dimensions of the concerns-based change model monitored throughout the study, through the use of questionnaire statements and interviews, included Stages of Concern of team users, Level of Use of the new practice, and the configuration of innovation components being implemented. At the end of the post-implementation year, team-based consultation was successfully institutionalized at four of the five schools. A grade-level sample of students referred during the study demonstrated reading gains significantly greater than those of students referred prior to implementation of the new service model. (Author/NB)

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CLASSROOM COLLABORATION: IMPLEMENTING CONSULTATION-BASED INTERVENTION IN FIVE MULTIDISCIPLINARY TEAMS

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ABSTRACT

This study attempted system-wide institutionalization of a team-based consultation service delivery model into school norms and work behaviors. Five replications of a field-based staff development Treatment Package were conducted over a two year implementation period with existing multidisciplinary Child Study Teams (CST's). Successful implementation in all schools was indicated by (a) increased teacher referrals; (b) decreased psychoeducational evaluations; (c) decreased special education placements; and (d) attainment of research-based change model criteria modified for use with teams. Diagnostic dimensions of the concerns-based change model monitored throughout the study, through the use of questionnaire statements and interviews, included Stages of Concern (SoC) of team users, Level of Use (LoU) of the new practice, and the configuration of innovation components (IC) being implemented. At the end of post-implementation year, team-based consultation was successfully institutionalized at four of the five sites. A grade-level sample of students referred during the study demonstrated reading gains significantly greater than those of students referred prior to implementation of the new service model.

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CLASSROOM COLLABORATION: IMPLEMENTING CONSULTATION-BASED INTERVENTION IN FIVE MULTIDISCIPLINARY TEAMS

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During the past two decades, research has provided a growing knowledge base regarding the relationship between effective instructional behaviors of teachers and student gains in achievement (Porter & Brophy, 1988; Rosenfield, 1985, 1987; Ysseldyke, 1987). On the other hand, although considerable concern continues to exist that many children do not receive adequate instruction (Anderson, Brubaker, Alleman-Brooks, & Duffy, 1985; Bennett, Desforges, Cockburn, & Wilkinson, 1984; Clark & Peterson, 1986; Rosenfield, 1985), research has documented only minimal translation of the knowledge of effective instruction into teacher practice in the classroom (Amabile & Stubbs, 1982; Huberman, 1983; Porter, 1986; Porter & Brophy, 1988; Rosenfield, 1987).

Similarly, although implementation of the Education for all Handicapped Children Act of 1975 (U.S. Department of Education, 1984) has successfully integrated many handicapped students into the mainstream of public schools, overreliance on the categorical approach established by the

P.L. 94-142 reform mandate has resulted in growing criticism regarding services for students with special needs (Lipsky & Gartner, 1987; Reynolds, Wang, & Walberg, 1987; Zins, Curtis, Graden, & Ponti, 1988). Another outcome has been limited commitment of resources to supporting teacher efforts to develop expanded repertoires of preventive instructional interventions in regular education classrooms (Curtis, Curtis, & Graden, in press). What emerges as central to these findings is the need for schools to integrate and reorganize their resources in an attempt to enhance instructional effectiveness in regular education classrooms, particularly for vulnerable learners (National Association of School Psychologists, 1984; National School Psychology Inservice Training Network, 1984; Will, 1986; Wang, Reynolds, & Walberg, 1987).

Previous research has illustrated the promise of the consultation model for increasing teacher understanding, skills, and effectiveness and for improving outcomes for learners (Curtis & Meyers, 1985; Gresham & Kendell, 1987; West & Idol, 1987). Although it still remains for the efficacy of consultation-based intervention to enhance academic learner outcomes to be demonstrated, implementation efforts, utilizing professionals trained and experienced in providing consultation services in selected schools, have shown the potential impact of this service delivery model for increasing classroom consultation and decreasing formal

testing and special education placement rates (Graden, Casey, & Bonstrom, 1985; Graden, Casey, & Christenson, 1985; Medway & Updyke, 1985, Fuchs & Fuchs, 1988; Ponti, Zins, & Graden, 1988; Maher, in press). To date factors such as attitudinal barriers, organizational constraints, inadequate systems preparation, and lack of inservice training of a core group of existing staff members have precluded institutionalization of a consultation model as the working practice of school buildings or systems (Graden, Casey, & Bonstrom, 1985; Graden, Casey, & Christenson, 1985; Medway & Updyke, 1985, Fuchs & Fuchs, 1988; Ponti et al., 1988; Maher, in press).

However, an extensive body of historical literature has examined both the characteristics and complexity of school change; and, in the last ten to fifteen years, intervention procedures have been sufficiently well documented and described to enable development of concrete recommendations for effective implementations (Joyce & Showers, 1980; Fullan, 1982; Squires, Huitt, & Segars, 1984; Brophy & Good, 1986; Porter & Brophy, 1988). As the earlier focus on innovation implementation as an event has given way to the perception of change as a process, research indicates that providing assistance adequate to assuring routine use of the innovation being implemented, continually monitoring and evaluating the change effort, implementing the innovation within contextually unique parameters, and

rooting the innovation within the purview of the mainstays of existing practice are critical to successful implementation (Huberman & Miles, 1984; Jaeger, 1984; Fullan, 1985; Maher & Illback, 1985; Hall & Hord, 1987; Hord, Rutherford, Huling-Austin, & Hall, 1987; Ponti et al., 1988).

The major change elements identified as critical by this research seem to be represented in the the dimensions of the Concerns-Based Adoption Model (CBAM). Within this framework, three diagnostic dimensions of the change process, Stages of Concern (SoC), Levels of Use (LoU) and Innovation Configuration (IC).are utilized to examine participants' emerging and evolving needs and to make decisions regarding change strategies.

The SoC dimension addresses how change participants perceive an innovation and how they feel about it. Three types of concern comprise seven distinctive, but not mutually exclusive Stages: SELF-Awareness, Informational, Personal; TASK-Management; and IMPACT-Consequence, Collaboration, and Refocusing. More complete descriptions of SoC are found in Appendix A. Although generally developmental in nature, SoC often recycle in response to phases of a complex, incremental innovation (Hall, George, & Rutherford, 1979; Hall & Hord, 1987; Hord et al., 1987); and they are "directly affected by the nature of the change and the kind and, especially, amount of assistance provided"

(Hord et al., 1987, 32). In successful implementations, SELF concerns are decreased (Hord & Huling-Austin, 1986).

The eight distinct levels of the LoU dimension describe user behaviors: Non-Use, 0; Orientation, I; Preparation, II; Mechanical, III; Routine; IVA; Refinement; IVB; Integration, V; Renewal, VI. An innovation becomes part of an organization's work behavior when Routine Use is established (Hall, Loucks, Rutherford, & Newlove, 1975; Hord et al., 1987; Hall & Loucks, 1977). More complete descriptions of LoU dimensions are found in Appendix B.

The IC dimension describes the innovation itself and focuses on operational forms an innovation can take. To be considered institutionalized, critical components of an innovation must be in use in an acceptable configuration (Hord et al., 1987; Hall & Hord, 1987).

The purpose of the present research was to attempt (a) system-wide institutionalization of a consultation-based ancillary service delivery system into the norms and work behaviors of the school organization, through modifying the role and function of members of existent school-based multidisciplinary Child Study Teams (CST's); and (b) demonstration of the potential of the team-based consultation model for increasing the achievement of referred students. Since the concerns-based change model had proven facilitative in implementing and institutionalizing numerous school change efforts

(Hall & Hord, 1987; Hord & Huling-Austin, 1986; Hall & Loucks, 1977), this study was implemented and evaluated within this type of framework.

More specifically, through district-wide implementation of a team-based consultation model, within a concerns-based framework, this research project collected formative and summative data regarding the following major outcome questions: (1) Do teacher referrals to building-level CST's increase? (2) Do multidisciplinary psychoeducational evaluations conducted by CST's decrease? (3) Do placements in special education programs decrease? (4) Does successful implementation of the complex innovation take place at the end of two years as indicated by (a) reduction in the intensity of SELF SoC reported by CST members, (b) attainment of at least Mechanical LoU III of the innovation, (c) demonstration of team ability to use critical components of the complex innovation in an acceptable (IC)? (5) Do post-implementation year-end data demonstrate institutionalization of the innovation into the school norms and work behavior as indicated by (a) maintenance of established referral, evaluation, and placement behaviors; (b) routine use (LoU IVA) of the model by CST's; and (c) CST SoC Profile reflecting low relative intensity of SELF concerns? (6) Does implementation result in increased achievement during the implementation and post-implementation years in a grade-level sample of referred students?

Method

Subjects

Subjects in this study were the existing multidisciplinary Child Study Teams in five 300 to 500 pupil elementary schools in a rural-suburban school district in the northeast. CST's generally consisted of the following members: building principal, reading teacher, school nurse teacher, school psychologist, regular education teacher(s), special education teacher(s), speech therapist and mathematics teaching assistant. Team size ranged from 6 to 10 members and team and make-up varied somewhat from building to building. Building principals served as team chairpersons.

At the outset of this study, a traditional team model of referral was in place. Upon completion of a comprehensive referral packet, generally the referring teacher met with the entire Child Study Team to discuss the student's presenting problem. Following the team discussion, in which the problems of the child and the possible contributing home factors were presented, the decision was frequently made to refer the student for formal psychoeducational assessment.

Procedure

Five replications of a field-based staff development Treatment Package, which incorporated empirically demonstrated components of the consultation-based

service delivery model and of the school change process, were conducted over a three year period.

Phase I

Implementation Year 1 consisted of needs assessment, bi-weekly building level CST case study staff development activities, and district-wide topical workshops for professional discipline groups to introduce, explain, and provide initial guided practice in key competencies of the model.

Phase II

Implementation Year 2 consisted primarily of district-wide day long skill development workshops with modeling and guided practice in the primary innovation components: consultation, observation-based assessment, curriculum-based assessment, and intervention techniques;

Phase III

Post-Implementation Year consisted of a one year period of CST operation and evaluation following Implementation.

The Treatment Package

The new practice was introduced within the context of a deliberately constructed organizational framework (Huberman & Miles, 1984) which emphasizes provision of instructional services along a continuum which interfaces regular and special education, teacher decision-making which matches student needs and instructional strategies,

and preventive early intervention in regular education. In addition, CST implementation of team-based consultation was a focus of the school-based improvement planning.

Initial planning also attempted to ground the new model in present practice (Hall & Hord, 1987). During the spring preceding the initiation of the innovation, meetings between members of the central office team and and each CST were scheduled to gather data regarding team perceptions of the existent service delivery model and to describe the district's philosophical and organizational framework.

Child Study Team Consultation Model. In the present study, a consultative model of services in which the collaborative resources of building multidisciplinary teams are directed at providing intervention assistance at the point of initial teacher referral was introduced. The process is initiated through teacher referral to the CST for consultation assistance. A CST member(s) is assigned to serve as consultant to the referring teacher.

Objectives of the model are to provide collaborative problem solving support to classroom teachers, to identify instructional and/or behavioral interventions to help referred students achieve success in the least restrictive regular education setting, to prevent future student problems and inappropriate placements in special education, and to enhance the instructional decision making competencies of classroom teachers with diverse groups of

students. However, consultation-based intervention is not intended to preclude or delay services for handicapped students who can be served most effectively through placement in special education programs. In cases where a handicapping condition is suspected, a multifactored psychoeducational evaluation to determine special education eligibility is appropriate.

The Change Facilitator Team. Although the principal is generally assumed to be the key to successful school improvement, the research, in addition to supporting this assumption, also reveals the importance of a change facilitator team (Hall & Hord, 1987). The change facilitator team assembled at the onset of this study consisted of (a) elementary building principals; (b) the Committee on Special Education (CSE) chair; (c) Pupil Personnel Services Director and Assistant Superintendent for Instruction; (d) a university based external consultant; and (e) members of the District CSE .

Concerns-Based Framework for Implementation. As described earlier in the study, a concerns-based change model, was used to guide the development and implementation of this study. At each site, monitoring and probing of (a) CST SoC regarding implementation of the new model, (b) LoU of the consultation-based intervention by CST's, and (c) the IC's of the service delivery model that developed was conducted during each Phase of the complex Treatment

Package. The research focus was on utilization of the concerns-based model to develop and monitor the consultation-based implementation effort, rather than on the change model itself.

Throughout the implementation process, Change Facilitators relied heavily on qualitative analysis of field contact notes (Miles & Huberman, 1984; Hall & Hord, 1987). In order to probe and monitor SoC, at the close of the implementation and post-implementation years; CST members completed questionnaires or open-ended Statement of Concern (Hall & Hord, 1987; Hord et al., 1987; Newlove & Hall, 1976).

To profile SoC data, team member responses to selected questions were coded and analyzed using the procedure described in Newlove and Hall (1976) and in Hord et al. (1987). The SoC were summarized as percent of team concern with regard to each SoC. Relative intensity of team SoC was displayed, using a modification of the CBAM SoC Profile Chart. In this process, each team member's concerns received equal weighting in the team SoC profile.

Throughout the implementation years, LoU, what the user is doing, was probed and monitored through observation of team process, review of referrals to the CSE and use of a modification of the LoU interview method described by Loucks, Newlove, and Hall (1975); Hall and Hord (1987); Hord et al., (1987). At the conclusions of each Phase of

the study, elementary principals interviewed team members regarding team LoU of the consultation model and assessed staff development needs at each replication site. To summarize and profile LoU data, summaries of team responses interview questions and follow-up probes were coded, analyzed and displayed on LoU Profile Charts (Hall et al, 1975; Hord et al, 1987). To ensure reliable SoC and LoU coding, a second coder coded 20% of the individual CST member and team responses.

Defining acceptable IC's of critical components and monitoring their use enabled provision of inservice that focused on what teachers were actually doing and facilitated implementation of the desired operational forms of the innovation (Hall & Loucks, 1981).

Following the second implementation year, CST folders and CSE referral packets from each building were reviewed using a CST Critical Component Checklist. Critical components included Systems Management, Problem Identification, Curriculum-Based Assessment, Observation-Based Assessment, Intervention, and Monitoring.

Examination of Referral, Evaluation, and Placement Practice

Child Study Team referrals were examined at the conclusion of each Phase of the study. The number of teacher referrals, psychoeducational evaluations completed, and CSE placements for each CST was recorded, tallied, summarized, and displayed by school on within-series

graphs (Barlow, Hayes, & Nelson, 1985).

Measurement of Student Achievement Gain

Second grade CST referrals during the school years 1982-83 to 1987-88 in Schools 1, 2, and 4, and whose reading comprehension scores were below the 45th national percentile (47 NCEs) on the Reading Comprehension subtest of the Stanford Achievement Test (published by Psychological Corporation in 1982), comprised the sample used to examine the potential of the team-based model for increasing student achievement. Students' scores on this subtest were also used as pretest and posttest measures. Differences in pre and posttest performance comprised reading comprehension achievement gain scores.

Results

Implementation Outcomes

Application of the Treatment Package in the current investigation resulted in successful implementation of the new service model at each of the school. Across the five replications depicted in Figure 1, examination of the relationship between the implementation of the consultation-based model and dependent referral, evaluation, and placement variables revealed consistent patterns of results.

Insert Figure 1 about here

First, implementation of consultation-based intervention as the service delivery model of existing elementary Child Study Teams, through field-based staff development, maintained or increased teacher referrals at each of the replication sites. During the three year baseline period of this study, the mean percentage of CST referrals across the five sites was 5.7%. On the other hand, students referred during the final year of implementation comprised 8.3% of the regular education student enrollment. As summarized in Table 1 and Figure 1, there appears to be a direct relationship between implementing the field-based staff development Treatment Package and increase in CST referrals, with greater increases occurring in the schools with the lower number of referrals initially.

Insert Table 1 about here

Second, in Schools 1, 3, 4, and 5 of this study, in which the mean percentage of referred students formally evaluated by CST's during the baseline years was relatively high, 71.0% to 82.7%, implementation of the field-based Treatment Package was successful in significantly reducing these percentages to between 28.6% and 38.9%. On the other hand, in the instance in which the pre-implementation percentage of referred students formally evaluated was

relatively low in this study, 27.2% at School 1, this pattern remained stable throughout the implementation period. Thus, there also appears to be a functional relationship between the implementation of a consultation-based service delivery model and decreasing team emphasis on relatively routine psychoeducational evaluation as a primary focus of team practice, with the greater change occurring in schools with the higher initial percentage of referrals evaluated.

Finally, the field-based change effort was successful in reducing special education placements initiated by CST referral. Although there were relatively low numbers of such placements at all replication sites in the baseline years (3-7), during the course of the implementation of team-based consultation model in five schools, there was still a mean reduction of 6% in the percentage of referred students placed in special education, in comparison with the baseline period. This reduction was due primarily to an increase in referrals, rather than a lowering of the number of students placed.

In addition, as summarized in Figure 2, at the end of the Implementation Phase of this study , all of the replication schools had successful implementations in terms of the research-documented concerns-based criteria. Each school's CST evidenced reduction of SELF concerns, attainment of at least Level III Mechanical Use of the

innovation, and demonstration of collaborative ability to utilize an acceptable configuration of the critical components of team-based intervention described earlier.

Insert Figure 2 about here

Institutionalization Outcomes

Team-based consultation was successfully institutionalized at the end of three years at four of the five replication sites. As indicated in both Figure 1 and Table 1, referral, evaluation, and placement behaviors established during implementation were maintained at Schools 1, 2, 4, and 5. Furthermore, as depicted in Figure 2, Routine Use of the new model and expression of low relative intensity of SELF Concerns by these same CST's were also achieved.

At School 3, however, both the number and percentage of students referred by teachers to the CST in the post-implementation year reflected a drop to a level far below either that established at the conclusion of the Implementation Phase or during the pre-implementation years. In addition, failure to attain Routine Use of the innovation was further indicative of this school's failure to institutionalize the innovation.

Academic Achievement

This research project also demonstrated the potential of the consultation intervention model for increasing the academic achievement of referred students as indicated in Figure 3. Examination of the 68% confidence bands around mean pretest and posttest scores for each student sample (Northwest Regional Educational Laboratory, 1983) and of gain scores using the Mann Whitney U test, indicated that, in contrast to a group of pre-implementation referrals, second graders serviced by teacher and CST consultant partners within the team-based model made significantly greater gains in reading comprehension (z=2.28; p<=.05).

Insert Figure 3 about here

Discussion

Successful implementation of consultation-based intervention at all five elementary schools in this study replicated on a system-wide basis the findings of previous researchers regarding the potential of the model for increasing referrals for classroom consultation and for decreasing formal assessments and special education placements (Graden, Casey, & Bonstrom, 1985; Ponti et al., 1988; Maher, in press). Furthermore, a significant finding was

that the pattern of change in the relationship between the referral and evaluation variables in the current study reflected an essential change in the nature and focus of the work of CST's. Data from this study clearly indicate that, through successful implementation of a team-based consultation model, schools can serve a greater number of teachers and students; significantly redirect collaborative professional effort toward classroom implementation of effective instructional strategies; and provide a wider range of services.

Previous post-implementation data have been disappointing in their failure to demonstrate institutionalization of the service model into the norms and work behaviors of the elementary school setting (Graden, Casey, & Bonstrom, 1985). When they have been collected, they have indicated little impact on traditional pre-implementation referral, testing, and placement practices as a result of the change effort. It is significant that, in contrast to previous efforts, examination of post-implementation referral, evaluation, and placement variables across the four successful replications of the current investigation, reveals a pattern of either maintenance or continued positive change and successful institutionalization. Therefore, results of this study demonstrate that institutionalization of a team-based consultation service delivery model into the

organizational behaviors of a school building or system can be achieved through utilization of a Field-based Treatment Package deliberately designed to ensure such institutionalization.

The current research project also provides important data regarding the usefulness of concerns-based strategies in school change efforts (Hall & Hord, 1987; Hord et al., 1987). From this perspective, the significance of this study lies primarily in (a) its support for the efficacy of a concerns-based approach in developing, implementing, and institutionalizing team-based consultation and in (b) its demonstration of the successful modification of concerns-based strategies for use in change efforts with user teams (Kuralt, 1990).

The institutionalization effort at School 3 was not totally successful. However, reflective analysis indicates that the CST at this replication site was relatively unprepared, had a relatively weak Change Facilitator team, and experienced mismatch during Phase II between its SoC profile and staff development experiences which met the needs of other district CST's. Therefore, the change effort at this replication site in actuality provides additional support for the efficacy of central tenets of the complex Treatment Package.

This study also demonstrates the potential of the

consultation-based intervention model for increasing the academic achievement of referred students. In contrast to a group of pre-implementation referrals, second graders serviced by teacher and CST consultant partners within the team-based model implemented in the current investigation made significant gains in reading comprehension.

Finally, little, if any, literature previously existed regarding the development of consultation competencies of school professionals previously functioning within a traditional model of service (Brown, 1985; Conoley & Conoley, 1982; Gallesich, 1874; Rosenfield, 1987). Therefore, the staff development Treatment Package utilized in this study provides a sorely needed model of field-based training (Barlow et al., 1984; Gresham & Kendell, 1987; Pryzwansky, 1986).

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Appendix A

Stages of Concern About the Innovation

Stage of Concern		Focus of Concern
	IMPACT	
6	Refocusing	Focus on idea/practice that might be even better
5	Collaboration	Coordination and cooperation with others regarding use of the innovation
4	Consequence	Consideration of relevant impact on students and on learner outcomes
	TASK	
3	Management	Organization of time and resources
	SELF	
2	Personal	Consideration of effect of innovation on role, status and/or finances
1	Informational	Acquisition of knowledge about the innovation
0	Awareness	Indication of little concern or involvement

Appendix B
Levels of Use of the Innovation

Level of Use	Operational Definition
Level VI RENEWAL	User seeks to modify innovation to increase impact on clients.
Level V INTEGRATION	User combines efforts with colleagues to achieve impact on clients.
Level IVB REFINEMENT	User varies use of innovation to increase impact on clients.
Level IVA ROUTINE	User makes few changes in use of the innovation.
Level III MECHANICAL USE	User focuses on attempting mastery of innovation components and/or day-to-day use.
Level II PREPARATION	User prepares for initial use of the innovation.
Level I ORIENTATION	User has acquired or is acquiring information and/or exploring use of the innovation.
Level 0 NON-USE	User has little or no knowledge of and/or involvement with the innovation.

Author's Notes

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Copies of materials used in this study are available from the author, Sally K. Kuralt, Ph.D., Hyde Park Central Schools, Hyde Park, N.Y. 12538.

Table 1

Pre-Implementation, Implementation, and Post-Implementation CST Referrals, Evaluations, and Placements at All Schools

Numbers/ (Rates)	Pre-Implementation 1982/3-1984/5**	Implementation 1986/7	1987/8	Post-Implementation 1988/9
		School 1		
+CST Referrals	31 (6.7%)	38 (8.2%)	35 (7.4%)	34.(7.3%)
*Evaluations	22 (71.0%)	13 (34.2%)	11 (31.4%)	6 (17.6%)
^Placements	3 (10.8%)	7 (18.4%)	4 (11.4%)	2 (5.9%)
		School 2		
+CST Referrals	31 (9.6%)	24 (8.2%)	28 (8.7%)	27 (8.9%)
*Evaluations	8 (27.2%)	5 (20.8%)	8 (28.6%)	5 (18.5%)
^Placements	4 (14.1%)	3 (12.5%)	7 (25.0%)	3 (11.1%)
		School 3		
+CST Referrals	16 (4.7%)	19 (5.4%)	28 (7.6%)	9 (2.3%)
*Evaluations	12 (78.7%)	9 (47.4%)	8 (28.6%)	1 (11.1%)
^Placements	3 (21.3%)	1 (5.3%)	1 (3.8%)	0 (0.0%)
		School 4		
+CST Referrals	23 (4.5%)	31 (6.6%)	36 (7.3%)	40 (7.9%)
*Evaluations	18 (75.7%)	10 (32.3%)	14 (38.9%)	8 (20.0%)
^Placements	6 (25.7%)	8 (25.8%)	5 (13.8%)	5 (12.5%)
		School 5		
+CST Referrals	10 (2.7%)	15 (4.0%)	45 (10.8%)	42 (10.3%)
*Evaluations	8 (82.7%)	5 (33.3%)	13 (28.9%)	2 (4.8%)
^Placements	3 (37.5%)	4 (26.7%)	7 (15.6%)	2 (4.8%)

** = Mean for the three baseline years
+ = Number of CST referrals and % student enrollment
* = Number of evaluations and % referrals evaluated
^ = Number of students placed and % referrals placed

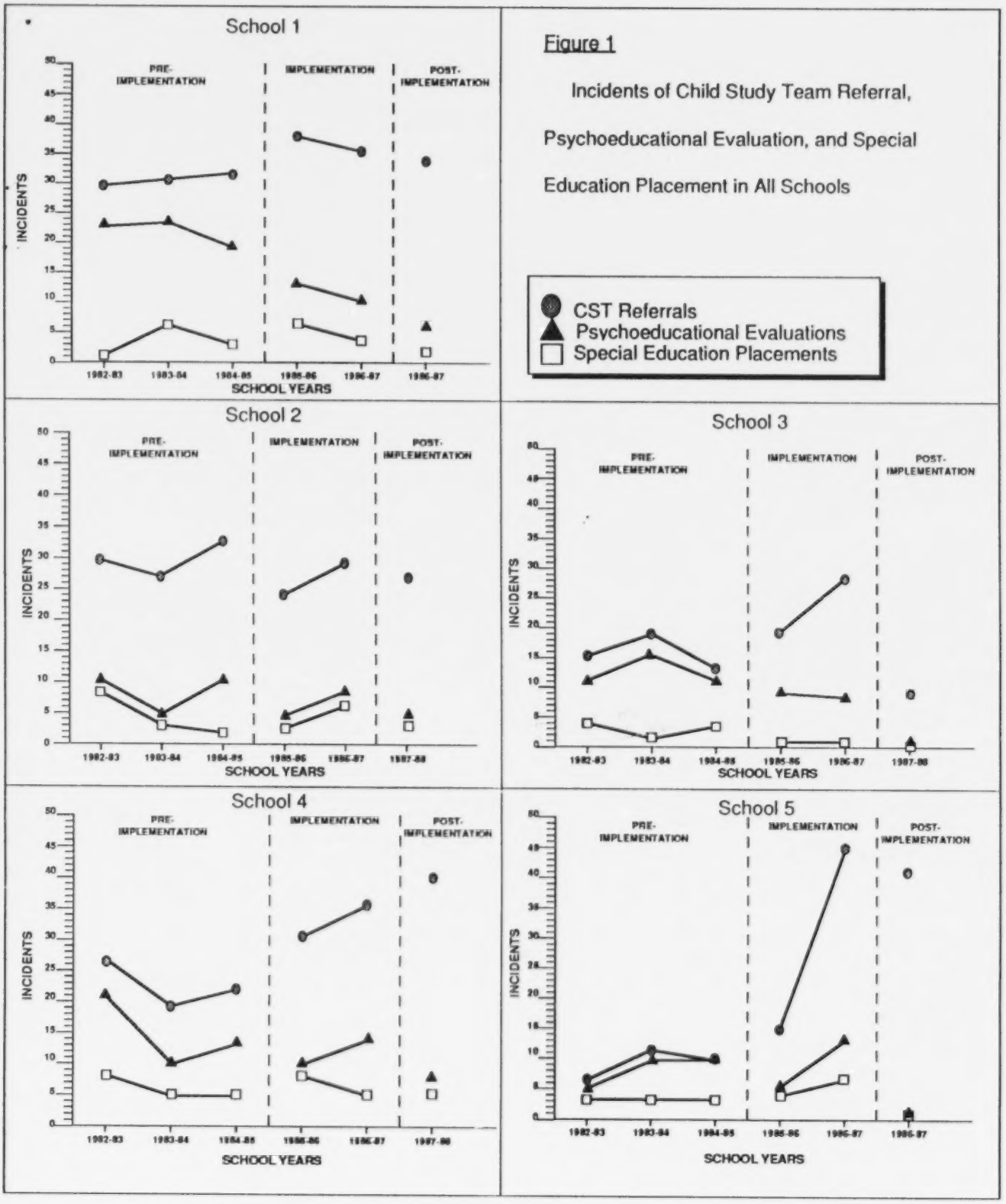

Figure 1

Incidents of Child Study Team Referral, Psychoeducational Evaluation, and Special Education Placement in All Schools

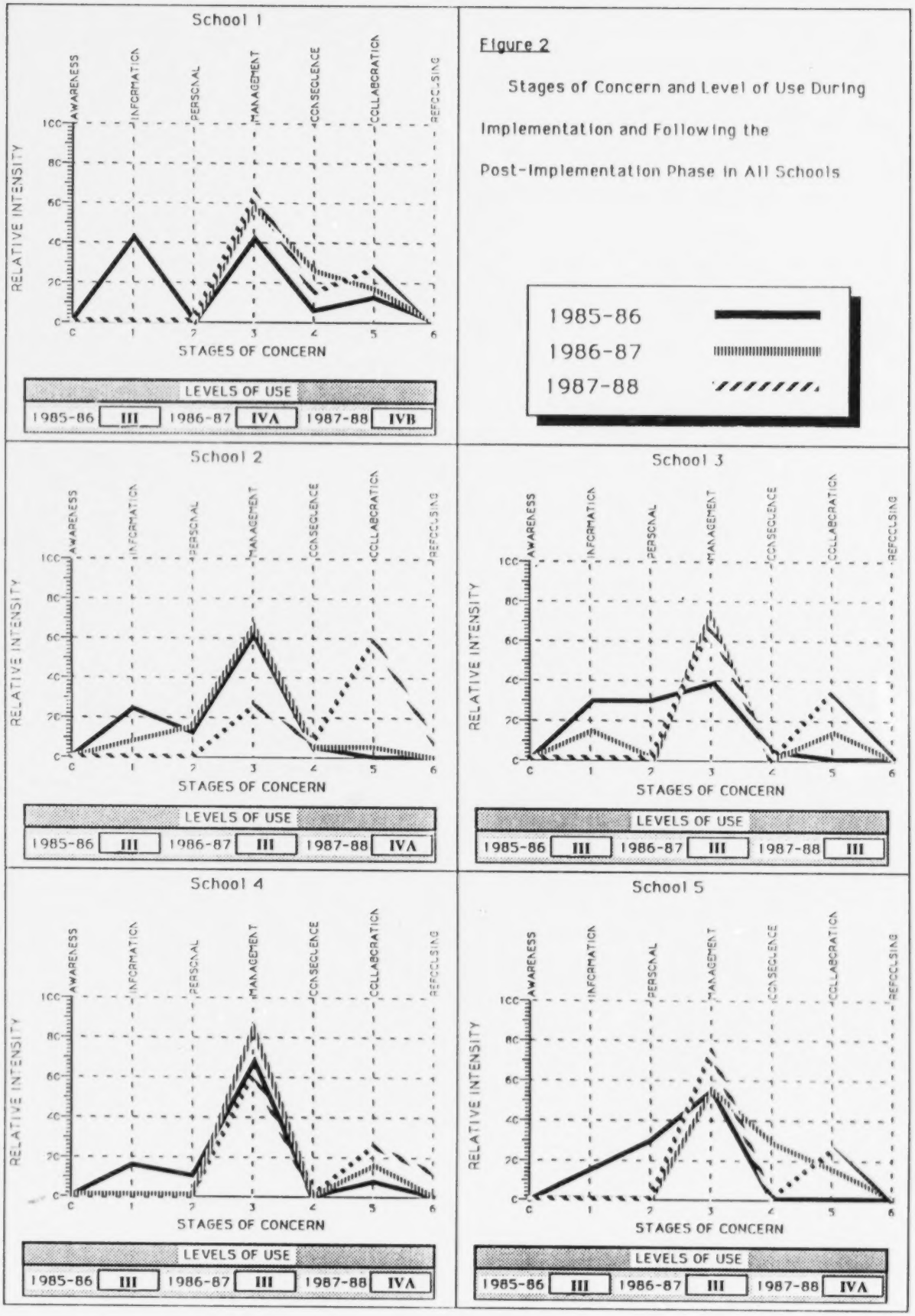
School 1
AWARENESS
INFORMATION
PERSONAL
MANAGEMENT
CONSEQUENCE
COLLABORATION
REFOCUSING
RELATIVE INTENSITY
100
80
60
40
20
0
0 1 2 3 4 5 6
STAGES OF CONCERN
LEVELS OF USE
1985-86 III 1986-87 IVA 1987-88 IVB
Figure 2
Stages of Concern and Level of Use During Implementation and Following the Post-Implementation Phase in All Schools
1985-86
1986-87
1987-88
School 2
LEVELS OF USE
1985-86 III 1986-87 III 1987-88 IVA
School 3
LEVELS OF USE
1985-86 III 1986-87 III 1987-88 III
School 4
LEVELS OF USE
1985-86 III 1986-87 III 1987-88 IVA
School 5
LEVELS OF USE
1985-86 III 1986-87 III 1987-88 IVA

Figure 3

Pretest and Posttest Reading Comprehension Achievement Scores of Second Graders Referred to Child Study Teams in Schools 1, 2, and 4